

MINUTES
OF
THE UTAH RADIATION CONTROL BOARD
DECEMBER 5, 2003
Department of Environmental Quality (Bldg. #2)
Conference Room 101
168 North 1950 West
Salt Lake City, Utah 84114-4250

BOARD MEMBERS PRESENT

Karen S. Langley, M.S., Chair
Stephen T. Nelson, Ph.D., Vice Chair
Dianne R. Nielson, Ph.D., Dir. of DEQ
Dane Finerfrock, Executive Secretary
Keith C. Barnes, J.D.
Kent J. Bradford, P.G.
Thomas K. Chism, M.S.
Rod O. Julander, Ph.D.
Linda M. Kruse, M.S.
Gregory G. Oman, D.D.S., B.S.
Robert S. Pattison, B.Sc.
John W. Thomson, M.D.
Gene D. White, Commissioner

PUBLIC

Kenneth Alkema, Envirocare of Utah, Inc.
Judy Fahys, Salt Lake Tribune
Alan Grundvig, ATK Thiokol Propulsion
Tye Rogers, Envirocare of Utah, Inc.
Kip Solomon, Ph.D., University of Utah

BOARD MEMBERS ABSENT/EXCUSED

Gary L. Edwards, M.S.

**DRC STAFF/OTHER DEQ MEMBERS
PRESENT**

Edith Barker, DRC Staff
Phillip Griffin, DRC Staff
Brian Hamos, DRC Staff
Craig Jones, DRC Staff
Loren Morton, DRC Staff
Fred Nelson, Attorney, DEQ/Atty Gen's Ofc
Yoli Shropshire, DRC Staff
William Sinclair, DEQ Deputy Director

GREETINGS/MEETING CALLED TO ORDER

The Utah Radiation Control Board convened in the DEQ Building #2, Room 101, 168 North 1950 West, in Salt Lake City, Utah. The meeting was called to order at 2:05 p.m. by Karen Langley, Chair to the Board. Karen Langley welcomed all members and public attending the meeting. Ms. Langley stated to the public that if they wished to address any items on the agenda to indicate it on the public sign-in sheet. Those desiring to comment would be given an opportunity to address their concerns during the comment period.

I. APPROVAL OF MINUTES (Board Action Item)

a. Approval of November 7, 2003 Minutes

Karen S. Langley, Chair, proposed the following changes to the Minutes:

1. Page 2., Introduction of New Staff Member, the incorrect spelling of Mr. Hogge's name as Hogged, **Change name spelling to "Hogge...."**
2. Page 6., Item IV. a. paragraph four, insert the date of the public hearing: **"November 25, 2003"**.

MOTION MADE BY KENT J. BRADFORD TO APPROVE THE MINUTES OF NOVEMBER 7, 2003, AS AMENDED, SECONDED BY THOMAS K. CHISM.

MOTION CARRIED AND APPROVED UNANIMOUSLY

II. RULES (Board Action Item)

a. Final Approval – Changes to R313-19 "Requirements of General Applicability to Licensing of Radioactive Material," R313-21, "General Licenses," and R313-22, "Specific Licenses" – Philip Griffin

Phillip Griffin introduced R313-19 and R313-21 for "final approval" consideration: On October 3, 2003, the Board approved the Division's filing of proposed changes to Rules R313-19, R313-21, and R313-22, and to hold a public comment period. These changes included corrections of typographical errors, incorporating new NRC requirements, adding new requirements for decontamination/decommissioning funding and changing the edition date for NRC rules that were incorporated by reference.

The 30-day public comment period opened November 1, 2003 and closed December 1, 2003. The notice of opportunity to comment on the proposed rule changes was published in the Salt Lake Tribune and the Deseret Morning News. Only two comments had been received as of the time of inclusion of this explanation of the Board Action Item in the Board Members' packets. These comments were from the NRC and can be

addressed in a non-substantive rule change after the rule changes become effective.

Recommendation

The Executive Secretary recommends that the Board give final approval of the proposed changes to the Utah Radiation Control Rules and establish an effective date of December 12, 2003. He also recommends that the Board approve the rule changes with the non-substantive typographical errors corrected.

Comments from Board Members:

Dianne Nielson stated that procedurally the Board is voting today on the rules with the non-substantive typographical errors changed, although the Board does not have the non-substantive changes before them.

MOTION MADE BY STEPHEN T. NELSON, VICE CHAIR, TO APPROVE THE RULE CHANGES WITH TYPOGRAPHICAL CORRECTIONS. APPROVAL OF THE RULES IS MADE WITH THE STIPULATION THAT THE ERRORS WILL BE CORRECTED AND WITH THE UNDERSTANDING THAT, IF NECESSARY, A NON-SUBSTANTIVE CHANGE WILL BE MADE AFTER THE RULES ARE EFFECTIVE. THE MOTION WAS SECONDED BY ROD O. JULANDER.

CARRIED AND APPROVED UNANIMOUSLY

III. RADIOACTIVE MATERIALS LICENSING/INSPECTION

-None-

IV. X-RAY REGISTRATION/INSPECTION

-None-

V. RADIOACTIVE WASTE DISPOSAL (Board Information Item)

a. Summary of Discussion at the Hazardous Waste Regulation and Tax Policy Task Force Meeting, November 18, 2003 – Bill Sinclair

Bill Sinclair summarized the Hazardous Waste Regulation and Tax Policy Task Force Meeting that took place on November 18, 2003:

Background:

The Hazardous Waste Task Force was approved by the Utah legislature during the 2003 session in response to a variety of bills introduced on radioactive and hazardous waste disposal issues. The Task Force has 19 months to study a wide range of waste issues in Utah, including whether Utah should accept more waste, how Utah facilities compare financially to out-of-state facilities, what obligations Utah has to accept waste based on interstate agreements, how to long-term manage waste facilities, whether

to impose additional or higher taxes on certain types of waste management and disposal, and whether to impose a proposed ban on class B and C waste disposal.

During the course of the study, legislators have visited disposal facilities and uranium mills, reviewed tax issues on various types of waste and facilities, and have held public hearings to solicit public comment. At the conclusion of the study term which is currently scheduled to end on November 30, 2004, the Task Force will report to lawmakers and make recommendations on a variety of issues, including a list of recommendations for waste treatment policies, fees and taxes, as well as proposed legislation.

Preliminary Report:

Based on information received by the Utah Hazardous Waste Task Force and on observations made by members during visits to waste facilities, the preliminary report contained a number of conclusions about waste management and disposal practices in Utah and included recommendations for draft legislation.

- Waste facilities regulated by the Department of Environmental Quality (DEQ) appear to be in substantial compliance with DEQ requirements;
- DEQ is providing effective oversight and monitoring of waste facilities to ensure compliance;
- Additional statutory requirements may be necessary in order to implement legislative policies relating to waste management;
- The Task Force should seek additional information by engaging an independent analysis of current DEQ regulatory requirements for the operation of waste facilities to determine if they are adequate to provide effective management of state environmental concerns and safeguard public health and quality of life; and
- If adequate funding is available, the independent analysis recommended above should be reported to the Task Force by May 1, 2003.

Recommended Legislation for 2004 Session:

The Task Force recommended the adoption of draft legislation titled, "Hazardous Waste and Non Hazardous Solid Waste Fee/Tax Amendments Act." As proposed, the draft legislation would eliminate by FY 2005 the gross receipts tax on hazardous waste facilities and non-hazardous solid waste facilities and reduce the fee on treated hazardous waste from \$28 to \$14/ton. In addition, the Task Force recommended that

legislation be drafted to require the approval of the Legislature and the Governor before radioactive waste that exceeds a certain radioactive concentration can be disposed of in the State.

Task Force Study Plan for 2004:

The preliminary report identified the following issues for study regarding the disposal of Class B and C low-level radioactive waste:

- Amount and source of B and C waste being produced and stored, trends;
- State regulation necessary and associated costs;
- Nature of B and C wastes (risks, radioactivity, etc.);
- Transportation issues (safety, costs, training, etc.);
- Economic impact (economic development, state image);
- Taxes, fees, and regulation at sites currently accepting B and C wastes;
- Role of interstate compacts and Utah's obligations under the current compact;
- Presentation from Envirocare regarding its long term plans; and,
- Other relevant issues.

Envirocare's Class B and C license application has been approved by the Utah Department of Environmental Quality. However, legislative and gubernatorial approval is required before such waste can be accepted at the facility. In addition, the Task Force identified the following other issues for study and tasks to be undertaken in 2004:

- Waste facility closure and post closure (radioactive and hazardous waste facilities);
- Radioactive waste perpetual care (cost, ownership, etc.);
- Regulatory and legislative history of how the state has approved the disposal of waste in the state -- including the legislature's, Governor's, and DEQ's authority and responsibility related to waste disposal; and,
- Additional public hearings.

The Task Force will meet again in the April/May time-frame.

Comments From Board Members:

Kent Bradford confirmed that the DRC just went through a review by the Nuclear Regulatory Commission.

Bill Sinclair stated that, periodically, the EPA looks at other state programs.

Kent Bradford asked if the legislature considered Federal reviews independent or if they look for something outside of the government regulatory-world to provide program reviews.

Bill Sinclair stated that one of the questions the committee was given to discuss with the Legislature, at the November meeting, was regarding the types of out-side reviews the agency receives. The committee discussed the latest review by the NRC and offered to provide the legislature with a copy of the report once it was final. Solid and Hazardous Waste has annual reviews by the EPA, which could also be provided to the legislature.

Dianne Nielson stated that whatever reviews have been done, the Legislature would consider them. If there were an out-side review, it would be taken into consideration.

VI. URANIUM MILL TAILINGS UPDATE (Board information items)

- a. Public comment Period—Decision to Renew Ground Water Quality Discharge Permit UGW170003, Plateau Resources Limited at the Shooting Canyon Uranium Mill Site in Ticaboo, Garfield County, Utah – Brian Hamos**

Brian Hamos updated the Board on this item:

In October 2002, Plateau Resources Limited decided to close and reclaim Shootaring Canyon uranium mill site near Ticaboo, Utah. The mill had only operated briefly for 76 days in 1982. Since then it has been maintained in standby status with the hope the uranium market would improve. As a result of the change in status of the mill, changes were made to the Ground Water Quality Discharge Permit to incorporate the site reclamation plan.

Changes include:

- Deletion of the construction permit that addressed the construction of the tailings disposal cell bottom liner. Since the facility will not operate, construction of the liner is not necessary
- Addition of design and construction specifications for the tailings cell cover system
- Revision of background water quality values based on additional groundwater monitoring data.
- Establishment of groundwater compliance limits that require additional groundwater monitoring if the limits are exceeded
- Revised groundwater monitoring program, including abandoning some monitoring wells and installing new ones to adjust for the downsized footprint of the tailings disposal cell.
- A 30 day public comment period on the Permit changes began on November 24, 2003. No comments have been received so far.

b. Summary of the Joint Moab Millsite Stakeholders and Cooperating Agencies Meeting, November 20, 2003, Moab – Loren Morton

Loren Morton updated the Board on this item, as follows:

Uranium Mills Tailing Activities--Since 10/3/03	
Date	Activity/Description
Moab Uranium Mill Tailings Project, Near Moab, Utah	
<i>Past Activities</i>	
November 20, 2003 (Morning)	<u>DOE Cooperators Meeting</u> <ol style="list-style-type: none"> 1. Dust Control – 2 applications/year (spring & fall) 2. Hwy 191 Remediation –wind-blown tailings removed <ol style="list-style-type: none"> a. DOE Removal – 4,400 yd³ (Spring, 2003) b. UDOT Removal - ~ 5,000 yd³ (Aug – Sept., 2003) c. Remaining Contamination – DOE estimates ~ 1,200 yd³ 3. Tailing Dewatering – ongoing, ~ 900,000 gals removed as of 11/20/03 4. Groundwater Interim Action <ol style="list-style-type: none"> a. Well Installed - 10 extraction, 6 observation b. Evaporation Pond – 3.8 acres, FML lined c. Pumping Rate – 25-30 gpm (as of 11/28/03 total volume pumped ~ 2.9 Million gals)

Date	Activity/Description
November 20, 2003	<ol style="list-style-type: none"> 5. DOE Organization – Moab Project now part of Environmental Management. 3 staff in Grand Junction. New Lead = Don Metzler 6. DOE Budget – President’s Recommendation = \$2 Million House/Senate Conference Report = \$4.5 Million 7. Draft EIS – received during meeting Current DOE Schedule: January 16, 2004 – comments due from Cooperators March, 2004 – next Cooperators meeting April, 2004 – start of public comment period (45 days) Early June, 2004 – end of public comment period November, 2004 – Final EIS issued December, 2004 – Record of Decision made 8. DEIS Approach to Remediation – no preferred alternative <ol style="list-style-type: none"> a. No Action b. On-site c. Off-site Removal – Crescent Junction, Klondike Flats, White Mesa d. Estimated Costs On-site = \$ 249 Million Off-site - \$407 Million (Klondike / truck) to \$543 Million (W. Mesa/slurry) 9. Groundwater Remediation <ol style="list-style-type: none"> a. Human Health – no exposure pathway b. Aquatic Receptors – endangered fish c. COCs = NH₃, U, Mn, Cu, SO₄ d. Groundwater Cleanup Goals – between 3 – 12 mg/l NH₃ (N). Assumes dilution upon entering river. e. Groundwater Models – predict 3 mg/l can be met in groundwater in: On-site = 80 years Off-site = 75 years f. Mill Site Groundwater – no current plan to remediate mill site uranium groundwater contamination. <p>Site Observational Work Plan – environmental data report to be provided to Cooperators by mid-December, 2003.</p>
November 20, 2003 (Afternoon)	<p><u>Stakeholders Meeting</u></p> <ol style="list-style-type: none"> 1. University of Utah Report: Groundwater Conditions Near Matheson Wetlands <<<< Presentation Today by Dr. Kip Solomon >>>> 2. Groundwater Subcommittee – group decided it important to continue this group to advise DOE on groundwater and surface water quality issues related to Moab Tailings Project. DOE willing to work with Subcommittee in parallel with EIS process. 3. DOE Budget – Don Metzler willing to work with DEQ and County Council in prioritizing any additional funding in the FY04 budget.

Date	Activity/Description
November 20, 2003 (Afternoon)	<p><u>Stakeholders Meeting Continued</u></p> <p>4. General Discussion – questions from general public</p> <ul style="list-style-type: none"> a. Clay Borrow Source – at White Mesa (location) b. Pipeline to White Mesa – can it be left in place? YES – if lined. c. Off-site Alternatives – DOE will consider sale of property. Some limitations due to active groundwater remediation that will be required (~ 80 years). d. DOE Cost Analysis – some specifics will be posted at the DOE reading rooms e. 200-1,000 Year Stability Period – this time period set by EPA (Title I) <p>5. Next Meeting – coordinate with Cooperators Meeting in March, 2004.</p>

a. Presentation of Recent Research: Hydrogeology Matheson Preserve

Dr. Kip Solomon presented research to the Board (see attached slide presentation).

VII. OTHER DIVISION ISSUES

-None-

VIII. PUBLIC COMMENT

-None-

IX. OTHER ISSUES

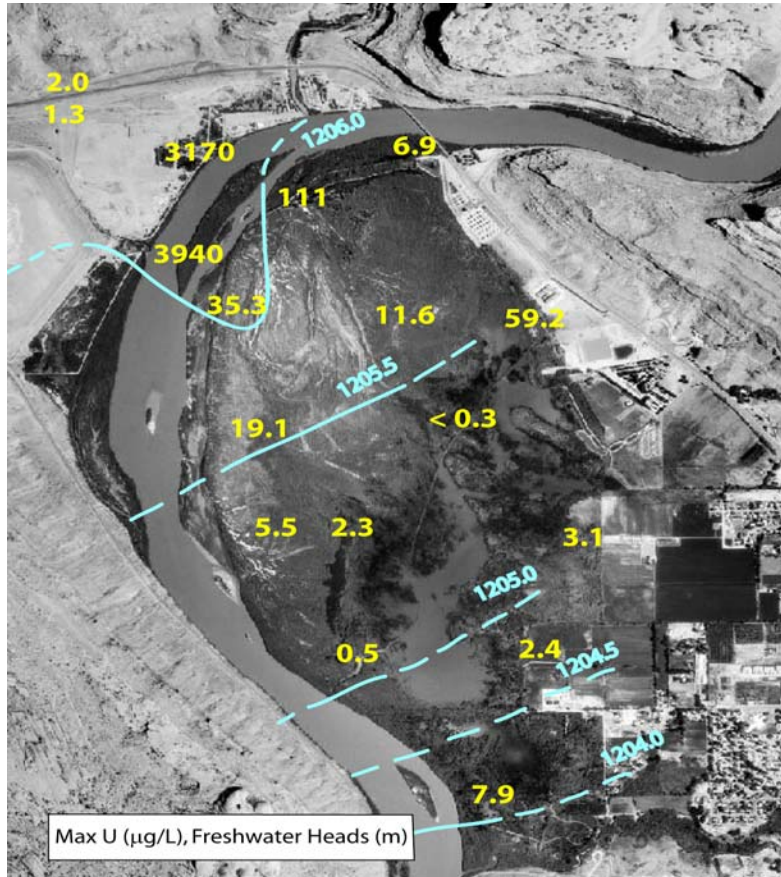
a. Next Board Meeting – January 16, 2003, 2:00-4:00 PM, Department of Environmental Quality, Building 2, Conference Room 101, 168 North 1950 West, Salt Lake City, Utah

A discussion followed by Board Members as to whether they would be able to attend and hold a Board Meeting on January 16, 2003. After much discussion the Board Members decided that most of them would be able to attend this meeting, therefore there will be a Board Meeting held on the above date.

The Board meeting adjourned at 3:20 p.m.

Findings

- River is NOT an absolute hydrologic boundary.



- Diffusion is not solely responsible for “mixing young (contaminated) and old (salty) fluids.

- Assuming $D_{\text{eff}} = 10^{-6} \text{ cm}^2/\text{s}$, mean diffusion length = 8 m.

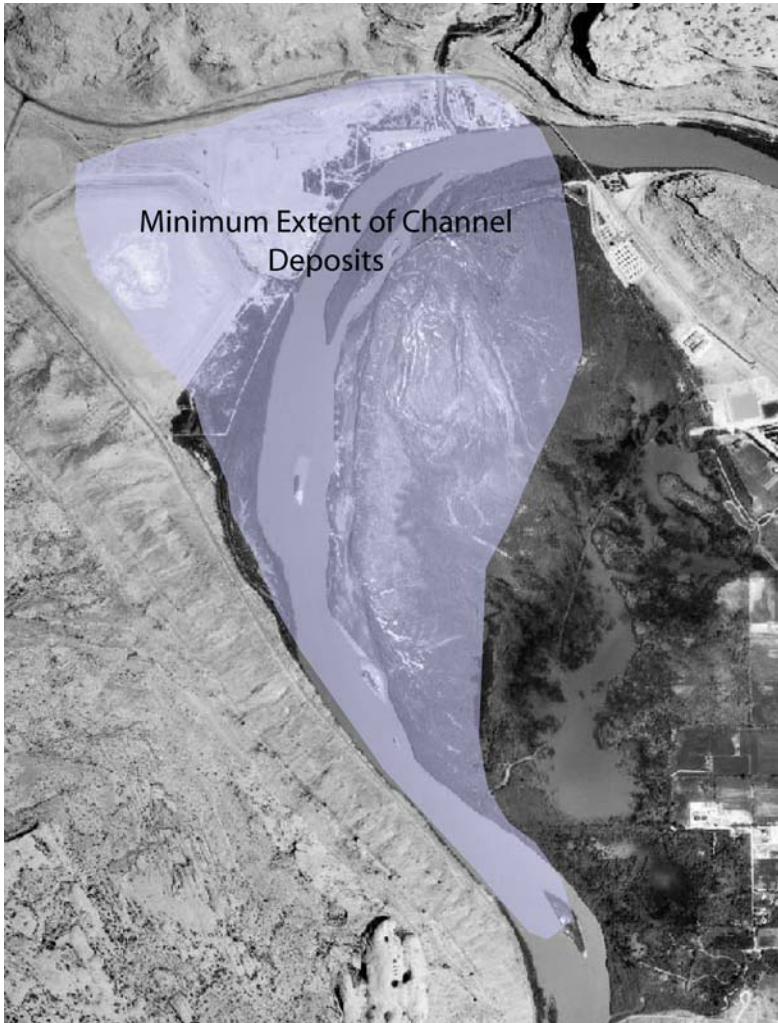
- The “extent” of contamination has NOT been defined.

Major Uncertainties



- Present rate of contaminant movement and discharge location(s)
- Connection between salty contaminated water beneath the tailings/wetlands and alluvial aquifer of Spanish Valley

Final Comment



- While time scale is poorly defined, the River has migrated extensively in the past.

- The current regime of the river appears anomalous with respect to the past.

